MULTI-CHAMBER VENTRICULAR AUTOMATIC CAPTURE METHOD AND APPARATUS FOR MINIMIZING TRUE AND BLANKING PERIOD INDUCED VENTRICULAR UNDERSENSING

ABSTRACT OF THE INVENTION

An implantable cardiac stimulation device and associated method perform a true or blanking period ventricular undersensing detection algorithm in response to ventricular loss of capture not associated with fusion or a change in capture threshold. The test identifies an originating cause of loss of capture, which may be ventricular undersensing of intrinsic R-waves or premature ventricular contractions occurring during a ventricular blanking period or atrial undersensing of P-waves resulting in blanking period ventricular undersensing. A corrective action is taken to reduce the likelihood of blanking period ventricular undersensing by automatically adjusting device operating parameters. The corrective action may include automatic adjustment of atrial sensitivity, shortening of the ventricular blanking period, or adjustment of the base stimulation rate. Minimizing the blanking period ventricular undersensing improves device performance by avoiding back-up stimulation and minimizing the risk of pacemaker competition-induced arrhythmias.